travel expenses incurred in personally appearing before the board shall be at the registrant's own expense.

67. Part 1698 is added to read:

PART 1698—ADVISORY OPINIONS

Secs.

Authority: Military Selective Service Act, 50 U.S.C. 451 *et seq.*; E.O. 11623.

§ 1698.1 Purpose.

The provisions of this part prescribe the procedures for requesting and processing requests for advisory opinions relative to a named individual's liability for registration under the Military Selective Service Act (MSSA), 50 U.S.C. App. 451 *et seq.*

§ 1698.2 Requests for advisory opinions.

(a) Any male born after December 31, 1959 who has attained 18 years of age may request an advisory opinion as to his liability to register under MSSA. A parent or guardian of such person who is unable to make a request for an advisory opinion may request an advisory opinion for him. Any Federal, state or municipal governmental agency may request an advisory opinion as to the liability of any male person born after December 31, 1959 who has attained 18 years of age to register under MSSA.

(b) Requests for advisory opinions shall be in writing and addressed to Director of Selective Service, ATTN: GCAO, Washington, DC 20435. With respect to the person concerning whom an advisory opinion is requested, the following should be furnished: full name, address, date of birth, Social Security Account Number, basis for the opinion that the registration requirement is inapplicable to him, and, if applicable, basis for his assertion that his failure to register ". . . was not a knowing and willful failure to register."

§ 1709.3 Requests for additional information.

(a) The Director may request additional appropriate information from the requester for an advisory opinion.

(b) The Director will forward a copy of the request by a Federal, state or municipal governmental agency for an advisory opinion to the person to whom the request pertains and invite his comments on it.

§ 1698.4 Confidentiality of advisory opinions and requests for advisory opinions.

Advisory opinions will be confidential except as provided in § 1698.6. Requests for advisory opinions will be confidential except as provided in § 1698.3.

§ 1698.5 Basis of advisory opinions.

Advisory opinions will be based on the request therefor, responses to requests for information, and matters of which the Director can take official notice.

§ 1698.6 Issuance of advisory opinions.

A copy of the advisory opinion will be furnished, without charge, to the requester therefor and to the individual to whom it pertains. A copy of an advisory opinion will be furnished, without charge, to any Federal, state, or municipal governmental agency upon request.

§ 1698.7 Reconsideration of advisory opinions.

Whenever the Director has reason to believe that there is substantial error in the information on which an advisory opinion is based, he may reconsider it and issue an appropriate revised opinion.

§ 1698.8 Effect of advisory opinion.

The Selective Service System will not take action with respect to any person concerning whom the Director has issued an advisory opinion insonsistent with that advisory opinion.

[FR Doc. 87-14709 Filed 6-30-87; 8:45 am]
BILLING CODE 8015-01-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 795 and 799

[OPTS-42050D; FRL-32263]

Certain Chlorinated Benzenes; Final Test Standards and Reporting Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Under section 4 of the Toxic Substances Control Act (TSCA), EPA is issuing a final Phase II rule that specifies test standards and reporting requirements for environmental effects testing of 1,2,3- and 1,2,4-trichlorobenzene (CAS Nos. 87-61-6 and 120-82-1, respectively). The chemical fate testing requirements in the final Phase I test rule have been satisfied and are hereby withdrawn.

DATES: In accordance with 40 CFR 23:5, this rule shall be promulgated for purposes of judicial review at 1 p.m. eastern ["daylight" or "standard" as appropriate] time on July 15, 1987. This rule shall become effective on August 14, 1987.

FOR FURTHER INFORMATION CONTACT: Edward A. Klein, Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Rm. E-543, 401 M St., SW., Washington, DC 20460, (202-554-1404).

SUPPLEMENTARY INFORMATION: In the **Federal Register** of April 7, 1986 (51 FR 11728), EPA issued a final Phase I test rule under section 4(a) of TSCA to require manufactures and processors of certain chlorinated benzenes to test for chemical fate and environmental effects. Also contained in that **Federal Register** issue were proposed Phase II test standards and reporting requirements for the required testing (51 FR 11756, April 7, 1986). The Agency is now promulgating under 40 CFR 799.1053, the final Phase II rule for certain chlorinated benzenes specifying the test standards and reporting requirements for the environmental effects testing. The chemical fate testing requirements under the final Phase I rule have been satisfied and are hereby withdrawn.

I. Background

The Phase I final rule specified the following testing requirements for the chlorinated benzenes: (1) for 1,2- and 1,4-dichlorobenzene, chemical fate testing, specifically, soil adsorption coefficient tests; (2) for 1,2,4-trichlorobenzene, chemical fate testing (soil adsorption coefficient test) and environmental effects testing to include acute and chronic toxicity to mysid shrimp (*Mysidopis bahia*); (3) for 1,2,3-trichlorobenzene, environmental effects testing to include: 96-hour LC50 for the fathead minnow *(Prime-phales promelas)*, 96-hour EC50 for *Gammarus sp.*, acute toxicity to mysid shrimp and silversides *(Menidia menidia)*, and chronic toxicity to mysid shrimp if the mysid shrimp LC50 is <1ppm.

Sections 790.50 and 790.52 of Title 40 of the Code of Federal Regulations describe the typical test rule development process. In the case of the chlorinated benzenes chemical fate and environmental effects test rule, which was initiated under the two-phase process, EPA modified the process. The reasons for this change in the test rule process for the chlorinated benzenes were discussed in the test standards proposal (51 FR 11756; April 7, 1986). As a result, EPA proposed the relevant

TSCA test guidelines as the test standards, concurrent with the publication of the chlorinated benzenes final Phase I test rule. In addition, EPA proposed that the data from the required studies be submitted within certain time periods, these time periods serving as the data submission deadlines required by TSCA section 4(b)(1).

II. Proposed Phase II Test Rule

A. Test Standards

On April 7, 1986, the Agency proposed (51 FR 11756) that the chemical fate and environmental effects testing on the chlorinated benzenes be conducted in accordance with specific guidelines proposed for 40 CFR Parts 796, 797, and 798 in the Federal Register of September 27, 1985 (50 FR 39252) and modified as specified in the Federal Register of January 14, 1986 (51 FR 1522).

For the purpose of developing data on the acute toxicity of the 1,2,4- and 1,2,3-trichlorobenzene to aquatic invertebrates, EPA proposed that testing using flow-through systems and measured concentrations be conducted with mysid shrimp according to 40 CFR 797.1930, and additionally be conducted for 1,2,3-trichlorobenzene, with one species of *Gammarus sp.* according to 40 CFR 797.1310. To develop data on the chronic toxicity of these two substances to aquatic invertebrates, EPA proposed that testing, using flow-through systems, be conducted with the mysid shrimp according to 40 CFR 797.1950.

For the purpose of developing data on acute effects of 1,2,3-trichlorobenzene to aquatic vertebrates, the Agency proposed that testing be conducted with the fathead minnow (*Pimephales promelas*) and silversides (*Menidia menidia*) according to 40 CFR 797.1400.

Finally, EPA proposed that the soil adsorption coefficient tests be conducted according to 40 CFR 796.2750.

B. Reporting Requirements

EPA proposed that all data developed under this rule be reported in accordance with the TSCA Good Laboratory Practice (GLP) standards in 40 CFR Part 792.

The specific reporting requirements for each of the proposed test standards were as follows:

All studies would be completed and the final report submitted to the Agency within 1 year of the effective date of the final Phase II rule. The only exception to this requirement would be the chronic toxicity study on mysid shrimp with 1,2,3-trichlorobenzene which would be required to be completed and the final report submitted within 15 months of the effective date of the final Phase II rule. This schedule was to allow data on the acute study to be developed and evaluated before starting the chronic study.

III. Response to Public Comments

The proposed chemical fate and environmental effects test standards for the chlorinated benzenes included soil adsorption coefficient testing for 1,2- and 1,4-dichlorobenzene and 1,2,4-trichlorobenzene. The Chemical Manufacturers Association (CMA) has reported results (Ref. 4) of sediment adsorption coefficient tests with 1,2-dichlorobenzene and 1,2,4-trichlorobenzene. The Agency has reviewed the study and believes the data are reliable and can be used to estimate the extend of adsorption of these substances onto soil and sediment. For 1,4-dichlorobenzene, the Agency used a measured log K_{ow} value and a predictive model to reliably estimate the log K_{oc} (Ref. 5) These data allow EPA to reasonably predict the soil adsorption coefficients of 1,2- and 1,4-dichlorobenzene and 1,2,4-trichlorobenzene. Therefore, the Agency is eliminating the soil adsorption testing requirements for the chlorinated benzenes.

EPA received no other comments from industry or other members of the public regarding the use of the proposed TSCA test guidelines as the test standards for the proposed chemical fate or environmental effects test standards for the chlorobenzenes or the proposed schedules for the required testing. However, the Agency has received, from industry representatives, letters of intent to sponsor the required environmental effects testing (Refs. 1 and 2).

IV. Final Phase II Test Rule

A. Test Standards

The TSCA test guidelines cited in the proposed Phase II test standards rule, with the exception of the chemical fate guidelines which have been deleted from this final test standard, shall be the test standards for the required environmental effects testing of 1,2,3- and 1,2,4-trichlorobenzene in 40 CFR 799.1053. The test guideline for the *Gammarus sp.* acute toxicity test, proposed as 40 CFR 797.1310 (51 FR 498, January 6, 1986) and now promulgated here as 40 CFR 795.120, shall be the test standard for the required *Gammarus sp.* testing for 1,2,3-trichlorobenzene. The Agency believes that all testing must be conducted in accordance with these test standards in order to ensure that the results are reliable and adequate.

The revisions to 40 CFR Parts 796, 797, and 798, issued in the Federal Register May 20, 1987 (52 FR 19056), for tests included in this Phase II rule are adopted as the test standards for the environmental effects testing of the chlorinated benzenes. EPA has responded to comments concerning these guideline revisions in the record for that rulemaking (Ref. 3).

B. Reporting Requirements

Under 40 CFR 799.10, the Agency requires that all data developed under this rule be developed and retained in accordance with the TSCA Good Laboratory Practice (GLP) standards (40 CFR Part 792).

Test sponsors are required to submit individual study plans at least 45 days prior to the initiation of each study in accordance with 40 CFR Part 79050.

The Agency is required by TSCA section 4(b)(1)(C) to specify the time period during which persons subject to a test rule must submit test data. On the basis of its experience with environmental effects testing, EPA is adopting the schedule that was proposed on April 7, 1986 (51 FR 11756) for the submission of final test reports in this final Phase II rule.

The Agency has revised the reporting requirement for the submission of interim progress reports for testing under section 4 of TSCA. Accordingly, the Agency is now requiring only 6-month interim progress reports on all studies for the chlorinated benzenes as opposed to the quarterly reporting schedule contained in the proposed test standard rule.

TSCA section 14(b) governs Agency disclosure of all test data submitted pursuant to section 4 of TSCA. Upon receipt of data required by this rule, the Agency will publish a notice of receipt in the Federal Register as required by section 4(d).

C. Conditional Exemptions Granted

The final rule for test rule development and exemption procedures (49 FR 39774, October 10, 1984) indicates that, when certain conditions are met, applicants for exemption will be notified by certified mail or in the final Phase II test rule that they have received conditional exemptions from test rule requirements for a given substance. The exemptions granted are conditional because they will be given based on the assumption that the test sponsors will complete the required testing according to the test standards and reporting requirements established in the final Phase II test rule for the given substance. TSCA section 4(c)(4)(B) provides that if an exemption is granted prospectively (that is, on the basis that

one or more persons are developing test data, rather than on the basis of prior test data submissions), the Agency must terminate the exemption if any test sponsor has not complied with the test rule.

Since sponsors have indicated to EPA by letters of intent (Refs. 1 and 2) their agreement to sponsor all of the environmental effects tests required for the chlorinated benzenes included in the final Phase I test rule according to the test standards and reporting requirements established in this final Phase II test rule for the chlorinated benzenes, the Agency is hereby granting conditional exemptions to all such applicants for all of the environmental effects testing required for the chlorinated benzenes in 40 CFR 799.1053.

D. Judicial Review

The promulgation date for the chlorinated benzenes chemical fate and environmental effects Phase I final rule was established as 1 p.m. eastern standard time on April 21, 1986 (51 FR 11728; April 7, 1986). To EPA's knowledge, there are no petitions for judicial review of that Phase I final rule. Accordingly, any petition for judicial review of this Phase II final rule will be limited to a review of the test standards and reporting requirements for the chlorinated benzenes established in this rule.

E. Other Provisions

Section 4 findings, required testing, test substance specifications, persons required to test, enforcement provisions, and a summary of the economic analysis are presented in the final Phase I rule for the chlorinated benzenes.

V. Rulemaking Record

A. Supporting Documentation

EPA has established a record for this rulemaking [docket number (OPTS-42050D]. This record includes basic information considered by the Agency in developing this final rule, and appropriate **Federal Register** notices, as described in the proposal published on April 7, 1986 (51 FR 11756).

B. References

(1) Chemical Manufacturers Association. Letter Indicating CMA Will Conduct Testing of Chlorobenzenes Required Under the Final Environmental Effects Test Rule (51 FR 11728). (June 20, 1986.)

(2) Chemical Manufacturers Association. Letter Indicating CMA Will Conduct Chronic Mysid Shrimp Test on 1,2,4-Trichlorobenzene; Omitted From June 20, 1986 Letter. (July 14, 1986.)

(3) USEPA. Revision of TSCA Test Guidelines (52 FR 19056; May 20, 1987).

(4) Chemical Manufacturers Association. Letter Reporting Study "Transfer Coefficients of Selected Sediment-Bound Organic Chemicals In A Model Aquatic System" and Request for Agency Review. (December 8, 1986.)

(5) Memorandum. Asa Leifer, Exposure Assessment Branch, Exposure Evaluation Division, to John Walker, Test Rules Development Branch, Existing Chemicals Assessments Division. An Evaluation of Sediment Sorption Data for 1,2-Dichlorobenzene and 1,2,4-Trichlorobenzene and the Ability to Predict the Sorption of Chlorobenzenes to Soil. (February 2, 1987.)

The record is open for inspection from 8 a.m. to 4 p.m., Monday through Friday except legal holidays, in Rm. NE G-004, 401 M St., SW., Washington, DC 20460.

VI. Other Regulatory Requirements

A. Executive Order 12291

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirements of a Regulatory Impact Analysis. This test rule is not major because it does not meet any of the criteria set forth in section 1(b) of the Order. The economic analysis of the testing of the chlorinated benzenes was discussed in the Phase I test rule.

This final Phase II test rule was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291. Any comments received from OMB are included in the record for this rulemaking.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, (15 U.S.C. 601 *et seq.*, Pub. L. 96-354, September 19, 1980), EPA is certifying that this rule, will not have a significant impact on a substantial number of small businesses for the following reasons:

(1) There are not a significant number of small businesses manufacturing the chlorinated benzenes.

(2) Small processors are not expected to perform testing themselves, or to participate in the organization of the testing efforts.

(3) Small processors are unlikely to be affected by reimbursement requirements, and any testing costs passed on to small processors through price increases will be small.

C. Paperwork Reduction Act

OMB has approved the information collection requirements contained in the proposed rule under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*, and has assigned OMB control number 2070-0033. No public comments on these requirements were submitted to the Office of Information and Regulatory Affairs of OMB.

List of Subjects in 40 CFR Parts 795 and 799

Testing, Environmental protection, Hazardous substances, Chemicals, Recordkeeping and reporting requirements.

Dated: June 17, 1987.

J.A. Moore,

Assistant Administrator for Pesticides and Toxic Substances.

Therefore, Chapter I of Title 40 CFR is amended as follows:

PART 795—[AMENDED]

1. In Part 795: a. The authority citation for Part 795 continues to read as follows:

Authority: 15 U.S.C. 2603.

b. By adding § 795.120 to Subpart C, to read as follows:

§ 795.120 Gammarid acute toxicity test.

(a) *Purpose.* This guideline is intended for use in developing data on the acute toxicity of chemical substances and mixtures subject to environmental effects test regulations under the Toxic Substances Control Act (TSCA) (Pub. L. 94-469, 90 Stat. 2003 (15 U.S.C. 2601 *et. seq.*)). This guideline describes a test to develop data on the acute toxicity of chemicals to gammarids. The United States Environmental Protection Agency (EPA) will use data from this test in assessing the hazard of a chemical to aquatic organisms.

(b) *Definitions.* The definitions in section 3 of TSCA and in Part 792 of this chapter, Good Laboratory Practice Standards, apply to this test guideline. The following definitions also apply to this guideline:

"Death" means the lack of reaction of a test organism to gentle prodding.

"Flow-through" means a continuous or an intermittent passage of test solution or dilution water through a test chamber or a holding or acclimation tank, with no recycling.

"LC50" means the median lethal concentration, i.e., that concentration of a chemical in air or water killing 50 percent of the test batch of organisms within a particular period of exposure (which shall be stated).

"Loading" means the ratio of the biomass of gammarids (grams, wet weight) to the volume (liters) of test solution in either a test chamber or passing through it in a 24-hour period.

"Solvent" means a substance (e.g., acetone) which is combined with the test substance to facilitate introduction

of the test substance into the dilution water.

"Static system" means a test chamber in which the test solution is not renewed during the period of the test.

(c) *Test procedures*—(1) *Summary of the test.* In preparation for the test, test chambers are filled with appropriate volumes of dilution water. If a flow-through test is performed, the flow of dilution water through each chamber is adjusted to the rate desired. In a static test, the test substance is introduced into each test chamber. In a flow-through test, the rate in which the test substance is added is adjusted to establish and maintain the desired concentration of test substance in each test chamber. The test is started by randomly introducing gammarids, which have been acclimated to the test conditions, into the test chambers. Gammarids in the test chambers are observed periodically during the test; the dead gammarids are removed and the findings recorded. Dissolved oxygen concentration, pH, temperature, and the concentration of test substance in test chambers are measured at specified intervals. Data collected during the test are used to develop concentration—response curves and LC50 values for the test substance.

(2) [Reserved].

(3) *Range-finding test.* (i) A range-finding test should be conducted to establish test substance concentrations to be used for the definitive test.

(ii) The gammarids shall be exposed to a wide-range of concentrations of the test substance (e.g., 1, 10, 100 mg/1, etc.), usually under static conditions.

(iii) A minimum of five gammarids should be exposed to each concentration of test substance for a period of 96 hours. The exposure period may be shortened if data suitable for determining concentrations in the definitive test can be obtained in less time. Nominal concentrations of the test substance may be acceptable.

(4) *Definitive test.* (i) The purpose of the definitive test is to determine the 24, 48, 72, and 96—hour LC50 values and the concentration-response curves.

(ii) A minimum of 20 gammarids per concentration shall be exposed to five or more concentrations of the test substance chosen in a geometric series in which the ratio is between 1.5 and 2.0 (e.g., 2, 4, 8, 16, 32, 64 mg/L). The range and number of concentrations to which the organisms are exposed shall be such that in 96 hours there is at least one concentration resulting in mortality greater than 50 and less than 100 percent, and one concentration causing greater than zero and less than 50 percent mortality. An equal number of gammarids may be placed in two or more replicate test chambers. Solvents should be avoided, if possible. If solvents have to be used, a solvent control, as well as a dilution control, shall be tested at the highest solvent concentration employed in the treatments. The solvent should not be toxic or have an effect on the toxicity of the test substance. The concentration of solvent should not exceed 0.1 ml/L.

(iii) Every test shall include a concurrent control using gammarids from the same population or culture container. The control group shall be exposed to the same dilution water, conditions and procedures, except that none of the test substance shall be is added to the chamber.

(iv) The dissolved oxygen concentration, temperature and pH of the test solution shall be measured at the beginning of the test and at 24, 48, 72 and 96 hours in at least one replicate each of the control, and the highest, lowest and middle test concentrations.

(v) The test duration is 96 hours. The test is unacceptable if more than 10 percent of the control organisms die during the test.

(vi) In addition to death, any abnormal behavior or appearance shall also be reported.

(vii) Gammarids shall be randomly assigned to the test chambers. Test chambers shall be positioned within the testing area in a random manner or in a way in which appropriate statistical analyses can be used to determine whether there is any variation due to placement.

(viii) Gammarids shall be introduced into the test chambers after the test substance has been added.

(ix) Observations on compound solubility shall be recorded. The investigator should record the appearance of surface slicks, precipitates, or material adhering to the sides of the test chambers.

(5) [Reserved].

(6) *Analytical measurements*—(i) *Water quality analysis.* The hardness, acidity, alkalinity, pH, conductivity, TOC or COD, and particulate matter of the dilution water shall be measured at the beginning of each definitive test.

(ii) *Collection of samples for measurement of test substance.* Each sample to be analyzed for the test substance concentrations shall be taken at a location midway between the top, bottom, and sides of the test chamber. Samples should not include any surface scum or material dislodged from the bottom or sides. Samples shall be analyzed immediately or handled and stored in a manner which minimizes loss of test substance through microbial degradation, photogradation, chemical reaction, volatilization, or sorption.

(iii) *Measurement of test substance.* (A) For static tests, the concentration of dissolved test substance (that which passes through a 0.45 micron filter) shall be measured in each test chamber at least at the beginning (zero-hour, before gammarids are added) and at the end of the test. During flow-through tests, the concentration of dissolved test substance shall be measured in each test chamber at least at 0 and 96-hours and in at least one chamber whenever a malfunction of the test substance delivery system is observed.

(B) The analytical methods used to measure the amount of test substance in a sample shall be validated before beginning the test. This involves adding a known amount of the test substance to each of three water samples taken from a chamber containing dilution water and the same number of gammarids as are placed in each test chamber. The nominal concentrations of the test substance in these samples should span the concentration range to be used in the test. Validation of the analytical method should be performed on at least two separate days prior to starting the test.

(C) An analytical method is not acceptable if likely degradation products of the test substance give positive or negative interferences, unless it is shown that such degradation products are not present in the test chambers during the test.

(D) Among replicate test chambers, the measured concentrations shall not vary more than 20 percent. The measured concentration of the test substance in any chamber during the test shall not vary more than plus or minus 30 percent from the measured concentration in that chamber at zero time.

(E) The mean measured concentration of dissolved test substance shall be used to calculate all LC50's and to plot all concentration-response curves.

(d) *Test conditions for definitive test*—(1) *Test species*—(i) *Selection.* (A) The amphipods, *Gammarus fasciatus, G. pseudolimnaeus,* and *G. lacustris* are specified for this test.

(B) Gammarids can be cultured in the laboratory or collected from natural sources. If collected, they must be held in the laboratory for at least 14 days prior to testing.

(C) Gammarids used in a particular test shall be of similar age and/or size and from the same source or culture population.

(ii) *Acclimation.* If the holding water is from the same source as the dilution water, acclimation to the dilution water

shall be done gradually over a 48-hour period. The gammarids then shall be held at least 7 days in the dilution water prior to testing. Any changes in water temperature should not exceed 2 °C per day. Gammarids should be held for a minimum of 7 days at the test temperature prior to testing.

(iii) *Care and handling.* Gammarids shall be cultured in dilution water under similar environmental conditions to those used in the test. Organisms shall be handled as little as possible. When handling is necessary it should be done as gently, carefully and quickly as possible. During culturing and acclimation, gammarids shall be observed carefully for signs of stress and mortality. Dead and abnormal individuals shall be discarded.

(iv) *Feeding.* The organisms shall not be fed during testing. During culturing, holding, and acclimation, a sufficient quantity of deciduous leaves, such as maple, aspen, or birch, should be placed in the culture and holding containers to cover the bottom with several layers. These leaves should be aged for at least 30 days in a flow-through system before putting them in aquaria. As these leaves are eaten, more aged leaves should be added. Pelleted fish food may also be added.

(2) *Facilities*—(i) *Apparatus*—(A) Facilities needed to perform this test include:

(*1*) Containers for culturing, acclimating and testing gammarids;

(*2*) Containers for aging leaves under flow-through conditions;

(*3*) A mechanism for controlling and maintaining the water temperature during the culturing, acclimation and test periods;

(*4*) Apparatus for straining particulate matter, removing gas bubbles, or aerating the dilution water, as necessary; and

(*5*) An apparatus for providing a 16-hour light and 8-hour dark photoperiod with a 15- to 30-minute transition period.

(B) Facilities should be well ventilated and free of fumes and disturbances that may affect the test organism.

(C) Test chambers shall be covered loosely to reduce the loss of test solution or dilution water due to evaporation and to minimize the entry of dust or other particulates into the solutions.

(ii) *Construction materials.* Construction materials and equipment that may contact the stock solution, test solution or dilution water should not contain substances that can be leached or dissolved into aqueous solutions in quantities that can alter the test results. Materials and equipment that contact stock or test solutions should be chosen to minimize sorption of test substances. Glass, stainless steel, and perfluorocarbon plastic should be used wherever possible. Concrete, fiberglass, or plastic (e.g., PVC) may be used for holding tanks, acclimation tanks, and water supply systems, but they should be aged prior to use. Rubber, coopper, brass, galvanized metal, and lead should not come in contact with the dilution water, stock solution, or test solution.

(iii) *Test substance delivery system.* In flow-through tests, diluters, metering pump systems or other suitable devices shall be used to deliver the test substance to the test chambers. The system used shall be calibrated before each test. The general operation of the test substance delivery system shall be checked twice daily during a test. The 24-hour flow shall be equal to at least five times the volume of the test chamber. During a test, the flow rates should not vary more than 10 percent from one test chamber to another.

(iv) *Test chambers.* Test chambers shall contain at least one liter of test solution. Test chambers made of stainless steel should be welded, not soldered. Test chambers made of glass should be glued using clear silicone adhesive. As little adhesive as possible should be left exposed in the interior of the chamber. A substrate, such as a bent piece of stainless steel screen, should be placed on the bottom of each test chamber to provide cover for the gammarids.

(v) *Cleaning of test system.* Test substance delivery systems and test chambers should be cleaned before each test. They should be washed with detergent and then rinsed sequentially with clean water, pesticide-free acetone, clean water, and 5-percent nitric acid, followed by two or more changes of dilution water.

(vi) *Dilution water.* (A) Clean surface or ground water, reconstituted water, or dechlorinated tap water is acceptable as dilution water if gammarids will survive in it for the duration of the culturing, acclimating, and testing periods without showing signs of stress. The quality of the dilution water should be constant enough that the month-to-month variation in hardness, acidity, alkalinity, conductivity, TOC or COD, and particulate matter is not more than 10 percent. The pH should be constant within 0.4 unit. In addition, the dilution water should meet the following specifications measured at least twice a year:

Substance	Maximum concentration
Particulate matter	20 mg/L
Total organic carbon (TOC) or chemical oxygen demand (COD)	2 mg/L 5 mg/L
Boron, fluoride	100 ug/L
Un-ionized ammonia	1 ug/L
Aluminum, arsenic, chromium, cobalt, copper, iron, lead, nickel, zinc.	1 ug/L
Residual chlorine	3 ug/L
Cadmium, mercury, silver	100 ng/L
Total organophosphorus pesticides	50 ng/L
Total organochlorine pesticides plus polychlorinated biphenyls (PCBs) or organic chlorine	50 ng/L 25 ng/L

(B) If the dilution water is from a ground or surface water source, conductivity and total organic carbon (TOC) or chemical oxygen demand (COD) shall be measured. Reconstituted water can be made by adding specific amounts of reagent-grade chemicals to deionized or distilled water. Glass-distilled or carbon-filtered deionized water with a conductivity less than 1 micromho/cm is acceptable as the diluent for making reconstituted water.

(C) The concentration of dissolved oxygen in the dilution water shall be between 90 and 100 percent saturation. If necessary, the dilution water can be aerated before the addition of the test substance. All reconstituted water should be aerated before use.

(3) *Test parameters.* Environmental parameters during the test shall be maintained as specified below:

(i) Water temperature of 18 ± 1°C.

(ii) Dissolved oxygen concentration between 60 and 105 percent saturation.

(iii) The number of gammarids placed in a test chamber shall not be so great as to affect the results of the test. Ten gammarids per liter is the recommended level of loading for the static test. Loading requirements for the flow-through test will vary depending on the flow rate of dilution water. The loading should not cause the dissolved oxygen concentration to fall below the recommended levels.

(iv) Photoperiod of 16 hours light and 8 hours darkness.

(e) *Reporting.* The sponsor shall submit to the EPA all data developed by the test that are suggestive or predictive of toxicity. In addition, the test report shall include, but not necessarily be limited to, the following information:

(1) Name and address of the facility performing the study and the dates on which the study was initiated and completed.

(2) Objectives and procedures stated in the approved protocol, including any changes in the original protocol.

(3) Statistical methods employed for analyzing the data.

(4) The test substance identified by name, Chemical Abstracts (CAS) number or code number, source, lot or batch number, strength, purity, and composition, or other appropriate characteristics.

(5) Stability of the test substance under the conditions of the test.

(6) A description of the methods used, including:

(i) The source of the dilution water, its chemical characteristics (e.g., hardness, pH, etc.) and a description of any pretreatment.

(ii) A description of the test substance delivery system, test chambers, the depth and volume of solution in the chamber, the way the test was begun (e.g., test substance addition), the loading, the lighting, and the flow rate.

(iii) Frequency and methods of measurements and observations.

(7) The scientific name, weight, length, source, and history of the organisms used, and the acclimation procedures and food used.

(8) The concentrations tested, the number of gammarids and replicates per test concentration. The reported results should include:

(i) The results of dissolved oxygen, pH and temperature measurements.

(ii) If solvents are used, the name and source of the solvent, the nominal concentration of the test substance in the stock solution, the highest solvent concentration in the test solution and a description of the solubility determination in water and solvents.

(iii) The measured concentration of the test substance in each test chamber just before the start of the test and at all subsequent sampling periods.

(iv) In each test chamber at each observation period, the number of dead and live test organisms, the percentage of organisms that died, and the number of test organisms that showed any abnormal effects in each test chamber at each observation period.

(v) The 48, 72 and 96-hour LC50's and their 95 percent confidence limits. When sufficient data have been generated, the 24-hour LC50 value also. These calculations should be made using the mean measured test substance concentrations.

(vi) The observed no-effect concentration (the highest concentration tested at which there were no mortalities or abnormal behavioral or physiological effects), if any.

(vii) Methods and data for all chemical analyses of water quality and test substance concentrations, including method validations and reagent blanks.

(9) A description of all circumstances that may have affected the quality or integrity of the data.

(10) The names of the sponsor, study director, principal investigator, names of other scientists or professionals, and the names of all supervisory personnel involved in the study.

(11) A description of the transformations, calculations, or operations performed on the data, a summary and analysis of the data, and a statement of the conclusions drawn from the analysis. Results of the analysis of data should include the calculated LC50 value, 95 percent confidence limits, slope of the transformed concentration-response line, and the results of a goodness-of-fit test (e.g., chi-square test).

(12) The signed and dated reports prepared by any individual scientist or other professional involved in the study, including each person who, at the request or direction of the testing facility or sponsor, conducted an analysis or evaluation of data or specimens from the study after data generation was completed.

(13) The locations where all specimens, raw data, and the final report are stored.

(14) The statement prepared and signed by the quality assurance unit.

PART 799—[AMENDED]

2. In Part 799:

a. The authority citation for Part 799 continues to read as follows:

Authority: 15 U.S.C. 2603, 2611, 2625.

§ 799.1052 [Amended]

b. Section 799.1052 is amended by removing and reserving paragraph (c).

c. Section 799.1053 is amended by removing and reserving paragraph (c) and adding paragraphs (d)(1)(ii) and (iii), (2)(ii) and (iii), (3)(ii) and (iii), (4)(ii) and (iii), and (5)(ii) and (iii), and (g) to read as follows:

§ 799.1053 Trichlorobenzenes.

* * * * *

(c) [Reserved]

(d) * * *

(1) * * *

(ii) *Test standards.* The marine invertebrate (mysid shrimp, *Mysidopis bahia*) acute toxicity testing for 1,2,3- and 1,2,4-trichlorobenzenes shall be conducted in accordance with § 797.1930 of this chapter.

(iii) *Reporting requirements.* (A) The acute toxicity tests on marine invertebrates shall be completed and the final report submitted to EPA within 1 year of the effective date of the final Phase II test rule.

(B) An interim progress report shall be submitted to the Agency within 6 months after the effective date of the final Phase II rule.

(2) * * *

(ii) *Test standard.* The marine fish (silverside minnow, *Menida menidia*) acute toxicity test shall be conducted for 1,2,3-trichlorobenzene in accordance with § 797.1400 of this chapter.

(iii) *Reporting requirements.* (A) The marine fish (silversides minnow, *Menidia menidia*) acute toxicity test shall be completed and the final results submitted within 1 year of the effective date of the Phase II final test rule.

(B) An interim progress report shall be submitted to EPA 6 months after the effective date of the final Phase II rule.

(3) * * *

(ii) *Test standard.* The freshwater fish (fathead minnow, *Pimephales promelas*) acute toxicity test shall be conducted for 1,2,3-trichlorobenzene in accordance with § 797.1400 of this chapter.

(iii) *Reporting requirements.* (A) The freshwater fish acute toxicity study shall be completed and the final report submitted to EPA within 1 year of the effective date of the final Phase II test rule.

(B) An interim progress report shall be submitted to EPA 6 months after the effective date of the final Phase II rule.

(4) * * *

(ii) *Test standard.* The freshwater invertebrate (Gammarus sp.) acute toxicity test shall be conducted for 1,2,3-trichlorobenzene in accordance with § 795.120 of this chapter.

(iii) *Reporting requirements.* (A) The freshwater invertebrate acute toxicity test shall be completed and the final report submitted to EPA within 1 year of the effective date of the final Phase II rule.

(B) An interim progress report shall be submitted to EPA 6 months after the effective date of the final Phase II rule.

(5) * * *

(ii) *Test standards.* The mysid shrimp (*Mysidopis bahia*) chronic toxicity test shall be conducted for 1,2,4-trichlorobenzene in accordance with § 797.1950 of this chapter. Testing shall also be conducted according to § 797.1950 for 1,2,3-trichlorobenzene should the results of testing required by (d)(1)(ii) of this section yield an acute LC50 for this chemical substance of less than 1 ppm.

(iii) *Reporting requirements.* (A) The mysid shrimp chronic toxicity test for 1,2,4-trichlorobenzene shall be completed and the final report submitted to EPA within 1 year of the effective date of the final Phase II rule. The mysid shrimp chronic toxicity test for 1,2,3-trichlorobenzene, (required if the LC50 is less than 1 ppm), shall be completed and final report submitted to EPA within 15

months of the effective date of the final Phase II rule.

(B) Progress reports shall be submitted to EPA at 6-month intervals, beginning 6 months after of the effective date of the final Phase II rule and until the final report is submitted to EPA.

(g) *Effective date.* The effective date of the final Phase II rule is August 14, 1987.

[FR Doc. 87-14812 Filed 6-30-87; 8:45 am]
BILLING CODE 6560-50-M

NATIONAL SCIENCE FOUNDATION

45 CFR Part 689

Misconduct in Science and Engineering Research

AGENCY: National Science Foundation.

ACTION: Final regulations.

SUMMARY: The National Science Foundation is issuing final regulations establishing what the NSF and its staff should do if they learn of possible misconduct under an NSF award and if they find actual misconduct under an NSF award. Responsibilities of grantee institutions, which play a major role in handling misconduct cases, are also set out.

EFFECTIVE DATE: July 1, 1987.

FOR FURTHER INFORMATION CONTACT: Robert M. Andersen or Arthur J. Kusinski, National Science Foundation, Office of the General Counsel, Room 501, 1800 G Street NW., Washington, DC 20550. Telephone: (202) 357-9435. (This is not a toll-free number.)

SUPPLEMENTARY INFORMATION: Although the National Science Foundation (NSF) has received relatively few allegations of misconduct or fraud occurring in NSF-supported research, or in proposals for the support of research, allegations of this nature are serious enough to warrant establishing formal policies and procedures to handle them. The Foundation believes that grantee institutions bear primary responsibility for preventing and detecting misconduct, and the proposed regulations set forth the role that institutions are expected to perform. The regulations, in establishing policies and internal NSF procedures for handling allegations of misconduct, provide for interim administrative actions, final actions and appeals procedures. The regulations are similar to misconduct policies and procedures of the Public Health Service (PHS) of the Department of Health and Human Services.

Analysis of Comments

NSF published proposed regulations in the Federal Register on February 10, 1987 (52 FR 4158) for public comment. The comment period ended on April 13, 1987. NSF received eleven letters, including one letter submitted after April 13 for which an extension had been granted. Three letters were from professional associations, seven letters from universities, and one from an individual who was familiar with the issues by virtue of his work experience.

Most letters were supportive of the proposed regulations in general. In particular, several applauded the recognition that the primary responsibility for preventing, detecting, investigating, and correcting misconduct lies with the awardee university.

Specific comments were on the following:

1. *Definition of "Misconduct".* Several letters commented that the definition of "misconduct" in § 689.1(a) was too vague or over-reaching.

Response: The definition is based on the Public Health Service (PHS) proposed definition and was adopted for the purposes of uniformity. The NSF definition does go somewhat further to reach misconduct in proposing research to the Foundation and "failure to meet other material legal requirements governing research".

NSF added the first clause so that the regulations covered misconduct at every stage of the research process, from proposals through publication of final results. PHS's failure to provide for misconduct at the proposal stage was deemed anomalous or an oversight. The addition makes it clear that plagiarism, fabrication, or other misconduct associated with proposing research for NSF funding is misconduct.

NSF added the final clause to reach serious misconduct not covered by § 689.1(a)(1) and (2). Since a violation of a specific legal requirement governing research must be shown to support a finding of misconduct under 689.1(a)(3), that provision is not impermissibly vague. Moreover, a breach of legal requirements governing research must be material to constitute misconduct.

2. *Anonymity of an informant and protection of the accused.* Several letters were concerned that maintaining the anonymity of an informant under § 689.4(b) could lead to malicious, frivolous, or unsubstantiated allegations of misconduct. Other letters asserted that the regulations give insufficient protection to accused individuals and institutions. Several argued that an accused had a right, founded on traditional notions of due process, to confront his or her accusers.

Response: Confidentiality for informants under § 689.4(b) is not absolute. NSF has added confidentiality provisions for the subjects of inquiries and investigations as a result of the comments. In addition, several amendments have clarified the rights of subjects of inquiries and investigations.

An informant's name will be kept confidential only "to the extent possible." During the initial stages of an investigation, it may be essential to keep all sources of information confidential so that the subject of the investigation does not take actions designed to frustrate the investigative process. Moreover, maintaining the confidentiality of sources prevents retaliation against "whistle blowers" and others who may be working under the supervision of the subject of the investigation. Confidentiality may not, however, be possible or desirable throughout the entire course of the misconduct proceeding.

We recognize that someone formally accused of misconduct has a right to know fully the charges, the evidence supporting the charges, and the source of the allegations. For more serious forms of misconduct, which might require imposition of stringent sanctions, the full procedures of the debarment and suspension regulations are afforded the accused under § 689.1(e).

In most other cases the accusers will be the Government or the awardee institution and the charges will be based on evidence developed from an investigation and administrative proceeding that affords the accused due process both in procedure and substance. Where this would require that an individual informant or supplier of evidence be named, we expect that it will be done.

NSF will also afford the subjects of inquiries or investigations discrete and confidential treatment, to the extent practicable and allowed by law. This intent is already conveyed by § 689.4(a). For clarity, we have added the following sentence to § 689.4(b): "To the extent allowed by law, documents and files maintained by NSF during the course of an inquiry or investigation of misconduct will be treated as investigative files exempt from mandatory public disclosure upon request under the Freedom of Information Act."

Some commenters apparently believe that the rights of a subject of inquiry or investigation should be coextensive with those of an accused in a criminal